



Application No 10/801,416
Art Unit 3739
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Title Hyperthermia Treatment Systems and Methods
For Thermosurgery Technologies Inc.
Docket 62815.00002

Filing of amended claims;

WHAT IS CLAIMED IS:

Claim 1 (currently amended) A method for operating a hyperthermia treatment system, comprising: measuring and controlling a precise temperature generated by a controlled low frequency field that is within an allowable preferred range of operation for the system; and determining whether to continue operation of the system based on a parameter related to the measured temperature; and management of the measured temperature through the utilization of a feedback loop that consists of an applicator with sensors, a processor and proprietary software; wherein

a) the feedback loop limits overheating, not through the utilization of other coolants or liquid cooling devices; wherein

b) the applicator houses the sensors creating a localized treatment.

The fixed location of the sensors within a single applicator results in the sensors being placed either internally or externally to the region not internally and externally.

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- Claim 2 (currently amended) The method of claim 1 wherein the parameter comprises the measured temperature wherein the parameter is a timed function.
- Claim 3 (currently amended) The method of claim 1 wherein the parameter comprises a temperature difference between the measured temperature and another measured temperature where temperature control is accomplished by a complex control system using continuous feedback without the utilization of any additional cooling device, liquid or coolant.
- Claim 4 (currently amended) The method claim 1 wherein the parameter comprises a rate of change of temperature through a continuous feedback loop which controls temperature spikes within a controlled spec without the utilization of other cooling mechanisms or liquid coolants.
- Claim 5 (currently amended) A medical device for performing hyperthermia treatment, comprising: a heat source for providing localized heat for the hyperthermia treatment;
a controlled temperature source generated from a battery driven PC controlled device;
a temperature sensor that is part of a feedback loop for continuously measuring monitoring temperature from the providing of heat; and
a processor that determines whether to continue the hyperthermia

treatment based on a parameter related to a the measured temperature that is within an allowable range of operation for the device.

Claim 6 (currently amended) The device of claim 5 wherein the parameter comprises the measured temperature wherein the preferred temperature profile is controlled by a microprocessor driven temperature control feedback system based on specific algorithms.

Claim 7 (currently amended) The device of claim 5 wherein the parameter comprises ~~a temperature difference between the measured temperature and another measured temperature.~~ the monitoring of temperature relative to the temperature profile and the adjustments of the low frequency field output to meet the profile.

Claim 8 (withdrawn) The device claim 5 wherein the parameter comprises a rate of change of temperature.

Claim 9 (currently amended) A method of operating a hyperthermia treatment system, comprising: performing a plurality of tests to determine whether the hyperthermia treatment system is operating properly; and terminating operation of the hyperthermia treatment system in response to failure of any test of a predefined set of the tests and preventing further operation of the hyperthermia treatment system until the hyperthermia treatment system is reset for further operation at a specified facility.

- Claim 10 (withdrawn) The method of claim 9 wherein the specified facility comprises a manufacturer of the hyperthermia treatment system.
- Claim 11 (currently amended) The method of claim 9 wherein the tests are for verifying proper operation inside and outside of a housing for the hyperthermia treatment system whereby the records of failure events are recorded in software.
- Claim 12 The method of claim 11 wherein the tests for verifying proper operation inside the housing comprise the predefined set of the tests.
- Claim 13 (withdrawn) The method of claim 11 further including terminating operation of the hyperthermia treatment system in response to failure of any test of a predefined second set of the tests and permitting further operation of the hyperthermia treatment system after a local reset is preformed.
- Claim 14 (withdrawn) The method of claim 13 wherein the tests for verifying proper operation outside of the housing comprise the predefined second set of the tests.
- Claim 15 (withdrawn) The method of claim 9 wherein the reset may be performed only after required repairs are completed.
- Claim 16 (withdrawn) The method of claim 9 wherein the reset includes providing a special code to they hyperthermia treatment system.
- Claim 17 (withdrawn) A method of operating a hyperthermia treatment system, comprising: determining when the hyperthermia treatment system has

provided a desired temperature for treatment;
evaluating one or more criteria pertaining to a thermal dose being
delivered; and terminating a treatment when evaluation of one or more
of the criteria indicates under treatment of a patient.

Claim 18 (withdrawn) A medical device for performing hyperthermia treatment,
comprising:

a heat source for providing heat for the hyperthermia treatment;
a temperature sensor for measuring temperature from the providing of
heat; and a processor that determines when the hyperthermia
treatment system has provided a desired temperature for treatment,
evaluates one or more criteria pertaining to a thermal dose being
delivered, and terminates a treatment when evaluation of one or more
of the criteria indicates under treatment of a patient.

Claim 19 (withdrawn) A method of operating a hyperthermia treatment system,
comprising: monitoring parameters relating to operation of the
hyperthermia treatment system; and
playing over the system a predefined announcement when a
predefined operational characteristic of the system has been detected.

Claim 20 (withdrawn) A medical device for performing hyperthermia treatment,
comprising:

a heat source from providing heat for the hyperthermia treatment;
a temperature sensor for measuring temperature from the providing of

heat; and a processor that monitors parameters relating to operation of the hyperthermia treatment system and plays over the system a predefined announcement when a predefined operational characteristic of the system has been detected.

Claim 21 (withdrawn) The device of claim 5 wherein the system is used to treat at least one of an abnormality, ailment, condition, disease, disorder and wound found on at least one of a patient's skin and tissue.

Claim 22 (withdrawn) The device of claim 21 wherein the at least one of an abnormality, ailment, condition, disease, disorder and wound include at least one of Actinic Keratosis, Angionoma, Acrochordon, Atypical Mycobacteria, Chromoblasomycosis, Cystic Acne, Clavus, Cutaneous Leishmaniasis, Dermatophytosis, Epidermoid Cysts, Fibroma, Hydrocystoma, Keloids, Molluscum Contagiosum, Mycetoma, Seborrheic Keratosis, Sporotrichosis, Syringoma and Warts.

Claim 23 (new) The temperature is maintained utilizing a feedback loop which controls the low frequency field output without utilization of any other cooling mechanisms or liquid coolants.

Claim 24 (new) Internal control systems provide safety precautions to prevent over temperature and / or electrical shock and / or status change during operation, including software record of failure event.